

FORM PTO-1449 (modified)  
To: U.S. Department of Commerce  
Patent and Trademark Office



Attorney Docket No.

Client Ref.

056291-5137

Z70457-1P US

Applicant: Davis et al.

Appln. No.: 09/869,925

Filing Date: July 9, 2001

Examiner: Lukton, David

Group Art Unit: 1653

**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**

Date: October 15, 2004

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**U.S. PATENT DOCUMENTS**

| Examiner's Initials* | Document Number | Date MM/YYYY | Name (Family Name of First Inventor) | Class | Sub Class | Filing Date (if appropriate) |
|----------------------|-----------------|--------------|--------------------------------------|-------|-----------|------------------------------|
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**FOREIGN PATENT DOCUMENTS**

|    |    | Document Number | Date MM/YYYY | Country | Inventor Name | English Abstract |    | Translation Readily Available |   |
|----|----|-----------------|--------------|---------|---------------|------------------|----|-------------------------------|---|
|    |    |                 |              |         |               | Enclosed         | No | Enclose                       | N |
| DL | DR | 39-19634        | 09/1964      | Japan   | Nakamura      |                  |    | X                             |   |
| DL | ER | 39-19635        | 09/1964      | Japan   | Nakamura      |                  |    | X                             |   |
|    | FR |                 |              |         |               |                  |    |                               |   |

**OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)**

|    |    |  |  |  |  |  |  |  |  |
|----|----|--|--|--|--|--|--|--|--|
| DL | GR | Abu Zarga et al., "New Natural Dibenzocycloheptylamine Alkaloids": A Possible Catabolic Route for the Colchicine Alkaloids", J. Nat. Prod., (1991), 54(4), 936-940   |  |  |  |  |  |  |  |
| DL | HR | Al-Tel et al., "New Natural Colchicinoids: Indications of Two Possible Catabolic Routes for the Colchicine Alkaloids", J. Nat. Prod., (1990) 53 (3), 623-629   |  |  |  |  |  |  |  |
| DL | IR | Banwell et al., "Total Syntheses of the Structures Assigned to Salimine and Jerusalemine, Alkaloids from <i>Colchicum decaisnei</i> Boiss. (Liliaceae)", J. Chem. Soc., Chem. Commun., (1994) (22) 2647-2649 |  |  |  |  |  |  |  |
| DL | JR | Banwell, et al., "Synthesis and Tubulin-Binding Properties of Some AC- and ABC-Ring Analogues of Alcolchicine", Aust J Chem., (1992), 45, 1967-1982  |  |  |  |  |  |  |  |
| DL | KR | Battersby et al., "Biosynthesis. Part 26 <sup>1</sup> . Synthetic Studies on Structural Modification of Late Biosynthetic Precursors for Colchicine", J. Chem. Soc., Perkin Trans 1, (1983), (12), 3053-3063 |  |  |  |  |  |  |  |
| DL | LR | Boger et al., "Thermal Reactions of Cyclopropanone Ketals. Application of . . . Total Synthesis of Colchicine", J. Am. Chem. Soc., (1986) (108 (21), 6713-6719   |  |  |  |  |  |  |  |
| DL | MR | Boyé et al. "185. Deaminocolchinyll Methyl Ether: Synthesis from . . . Errfects of Deaminocolchinyll Methyl Ether and Dehydro Analogs", Helv. Chem. Acta, (1989), 72 (8), 1690-1696                          |  |  |  |  |  |  |  |
| DL | NR | Brecht et al., "(-)-(M,7S)-Colchicine and (-)-(M,7S)-10-Ethylthiocolchicide/Alkyne . . . Consecutive [4+2] and [3+2] Cycloadditions", Eur. Jour. Org. Chem., (1998) (11) 2451-2460                           |  |  |  |  |  |  |  |
| DL | OR | Brossi et al., "aS, 7S-absolute configuration of natural (-)-colchicine and allocongeners", FEBS Lett., (1990), 262 (1), 5-7   |  |  |  |  |  |  |  |
| DL | PR | Orsini at al (1997) Carbohydrate Research 301, 95-109  |  |  |  |  |  |  |  |
| DL | QR | Brown e1 al (1995) J. Chem. Soc. Perkin. Trans. 1 577-581  |  |  |  |  |  |  |  |

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David Lukton

11-23-04

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## FOREIGN PATENT DOCUMENTS

| ORIGINAL PATENT DOCUMENTS |    |                 |              |         |               |  | Abstract |    | Readily Available |    |
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|                           | DR |                 |              |         |               |  |          |    |                   |    |
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## OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

|               |  |   |   |   |
|---------------|--|---|---|---|
| GR            | Deinum et al., "Synthesis and Binding to Tubulin of an Alcolcolchicine Spin Probe." Acta Chem. Scand, Ser B (1981) B35 (10), 677-681   |   |   |   |
| HR            | Dilger et al., "Arbeitsvorschriften und Meßwerte Procedures and Data Formaldehyd-O-oxid und Colchicine: ein eleganter Zugang zu Alcolcolchicinen", J. Prakt Chem./Chem-Ztg, (1998), 340 (5), 468-471 (in German) | x |   | x |
| <del>IR</del> | <del>Dokl Akad. Nauk USSR, (1991) (4) 33-35</del>  |   | x | x |
| JR            | Dumortier et al., "Alternations of Rings B and C of Colchicine Are Cumulative in Overall Binding to Tubulin but Modify Each Kinetic Step", Biochemistry, (1996), 35 (49), 15900-15906                            |   |   |   |
| KR            | Fernholz, "Über die Umlagerung des Colchicins mit Natriumalkoholat und die Struktur des Ringes C", Justus Liebig's Ann. Chem., CODEN: JLACBF, 568, (1950), 63-82   |   |   |   |
| LR            | Fitzgerald, "Molecular Features of Colchicine Associated with Antimitotic Activity and Inhibition of Tubulin Polymerization", Biochemistry Pharmacology, (1976), 25, 1383-1387                                   |   |   |   |
| MR            | Ghera et al., "Total Synthesis of Lignan (±)-Schizandrin", J. Chem. Soc., Chem. Commun., (1978) (11), 480-481  |   |   |   |
| NR            | Hahn et al., "Synthesis and Evaluation of 2-Diazo-3,3,3-Trifluoropropanoyl . . . Photochemistry, and Tubulin Binding", Photochem. Photobiol., (1992) 55 (1), 17-27   |   |   |   |
| OR            | Han et al., "Distances between the Paditaxel, Colchicine, and Exchangeable GTP Binding Sites on Tubulin", Biochemistry, (1998), 37 (19), 6636-6644   |   |   |   |

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|    |  |  |  |  |  |
|----|--|--|--|--|--|
| GR | Leiter et al., "Damage Induced in Sarcoma 37 with Chemical Agents. III. Colchicine Derivatives Related to Trimethylcolchicinic Acid and to Colchinel", J. Natl. Cancer Inst., (1952), 13, 379-392                              |  |  |  |  |
| HR | Medrano, "Roles of Colchicine Rings B and C in the Binding Process to Tubulin", Biochemistry, (1989), 28 (13), 5589-5599   |  |  |  |  |
| IR | Menéndez et al., "A Thermodynamic Study of the Interaction of Tubulin with Colchicine Site Ligands", J. Biol. Chem., (1989), 264, (28), 16367-16371  |  |  |  |  |
| JR | Olszewski et al., "Potential Photoaffinity Labels for Tubulin. Synthesis and . . . Colchicine, Combretastatin, and 3,4,5-Trimethoxybiphenyl", J. Org. Chem., (1994), 59 (15) 4285-4296   |  |  |  |  |
| KR | Powell et al., "Role of Ring C Substituents Related to Allocolchicine on Antitubulin Action", Med. Chem. Res., (1996), 164-173   |  |  |  |  |
| LR | Zh Obshch Khim., (1994) 64(5) 856-864 (In Russian)   |  |  |  |  |
| MR | Timbekov et al., "Mass Spectrometric Study of Alkaloids of the Homoaporphine, Homomorphine and Allocolchicine Series", "Tezisy Dokl. = Sov.-Indiskii Simp. Khim. Pri. Soedin., 5th (1978), p. 85 (Chemical Abstracts attached) |  |  |  |  |
| NR | Mackay et al., "Structures of Colchicine Analogues. I. Allocolchicine", Acta Cryst., (1989), C45, 795-799  |  |  |  |  |
| OR |  |  |  |  |  |
| PR |  |  |  |  |  |

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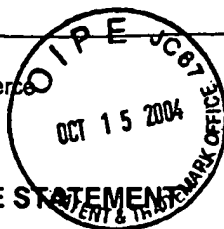
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|    |    |  |  |  |  |   |   |
|----|----|--|--|--|--|---|---|
| DL | GR | Hastie, "Spectroscopic analyses of colchicinoid-tubulin complexes", Cellular Pharmacology, (1993), 1 (Suppl. 1), S17-S21   |  |  |  |   |   |
| DL | HR | Hastie, "Spectroscopic and Kinetic Features of Alcolcolchicine Binding to Tubulin", Biochemistry, (1989), 28 (19), 7753-7760   |  |  |  |   |   |
| DL | IR | Hrbek et al., "Circular Dichroism of Alkaloids of Colchicine Type And Their Derivatives", Collect. Czech. Chem. Commun., (1982), 47 (8), 2258-2279                               |  |  |  |   |   |
| DL | JR | Iorio, "Contraction of the Tropolonic Ring of Colchicine by Hydrogen Peroxide Oxidation", Heterocycles, (1984), 22 (10), 2207-2211   |  |  |  |   |   |
| X  | KR | Izv Akad Nauk Turkm SSR, Ser Fiz-Tekh, Khim-Geol Nauk, (1976), (1), 70-73  |  |  |  | x | x |
| DL | LR | Kiselev et al., "Benzenoid Rearrangement of Colchicine by the Action of Ethylene Glycol", Zh. Org. Khim., (1977), 13 (11), 2337-2342 (in Russian) (English translation attached) |  |  |  |   |   |
| DL | MR | Kiselev et al., "Derivatives of Aminocolchicide - VI. DICOLCHICIDYL-L-LYSINE" Obshch. Khim., (1970), 40 (4), 914-915 (in Russian, English translation attached)                  |  |  |  |   |   |
| DL | NR | Kiselev, "Derivatives of Aminocolchicide. VII", Zh. Zh. Obshch. Khim., (1971), 41 (2) 464-466 (in Russian, English translation attached)   |  |  |  |   |   |
| DL | OR | Kita et al., "Non-phenolic oxidative coupling of phenol ether derivatives using phenyliodine (III) bis(trifluoroacetate)", Chem. Commun. (Cambridge), (1996) (12), 1481-1482     |  |  |  |   |   |

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